



Kingston Technology SSDNow V+ Series Flash Storage Drive

Introduction

This product description of the SSDNow Solid State flash drive is provided by Kingston, and is applicable for all Kingston's V+ series SSDNow products based on flash.

Features

- Interface: SATA 1.5Gb/s and 3.0Gb/s
- Form factor: 2.5" Standard HDD Form Factor

- Certifications
 - FCC
 - C-Tick
 - BSMI
 - VCCI
 - CE

Part Number(s)

Performance

SNV225-S2/64GB	Seq. Read: 220 MB/s - Seq. Write: 140 MB/s
SNV225-S2/128GB	Seq. Read: 220 MB/s - Seq. Write: 170 MB/s
SNV225-S2/256GB	Seq. Read: 220 MB/s - Seq. Write: 180 MB/s

Functional Block Diagram

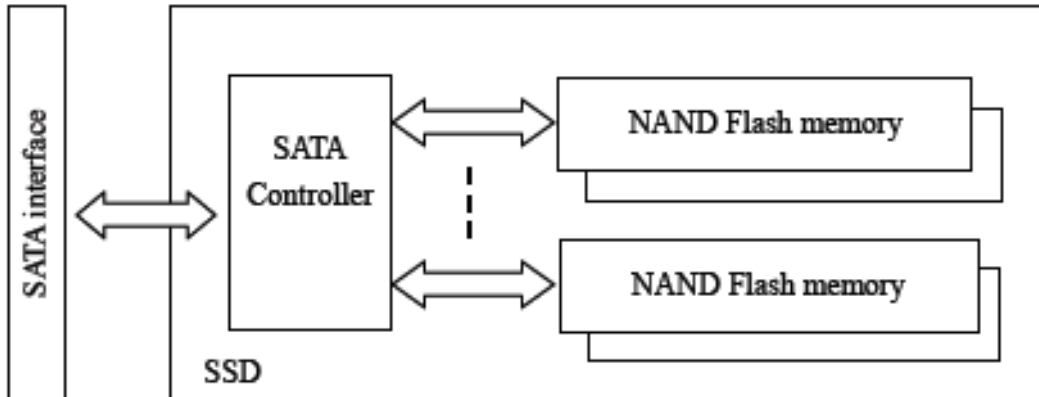


Figure 1: Kingston SSDNow V+ series Block Diagram

Pin Assignment

	Name	Type	Description	
Signal Segment	S1	GND		
	S2	A+	Differential Signal Pair A	
	S3	A-		
	S4	GND		
	S5	B-	Differential Signal Pair B	
	S6	B+		
	S7	GND		
Key and Spacing separate signal and power segments				
Power Segment	P1	V33	3.3V Power (Unused)	
	P2	V33	3.3V Power (Unused)	
	P3	V33	3.3V Power, Pre-charge (Unused)	
	P4	GND		
	P5	GND		
	P6	GND		
	P7	V5	5V Power, Pre-charge	
	P8	V5	5V Power	
	P9	V5	5V Power	
	P10	GND		
	P11	DAS/DSS	Device Activity Signal / Disable Staggered Spinup	
	P12	GND		
	P13	V12	12V Power, Pre-charge	
	P14	V12	12V Power	
	P15	V12	12V Power	

DC specification

Absolute Maximum Ratings;

Parameter	Symbol	Value	Unit	Note
All input/output voltages	V_{in}, V_{out}	- 5% to 5V to + 5%	V	
VCC voltage	V_{CC}	-0.3 to +6.5	V	
Operating temperature range	T_{opr}	0 to +70	°C	
Storage temperature range	T_{stg}	-40 to +85	°C	

Recommended Operating Conditions;

Parameter	Symbol	Min	Typ	Max	Unit	Note
Operating temperature	T_a	0	25	70	°C	
VCC voltage	V_{CC}	4.5	5	5.5	V	

Capacitance ($T_a = 25^\circ\text{C}$, $f = 1\text{MHz}$);

Parameter	Symbol	Min	Typ	Max	Unit	Test conditions
Input capacitance	C_{in}	-	-	12	pF	$V_{in} = 0\text{V}$
Output capacitance	C_{out}	-	-	12	pF	$V_{out} = 0\text{V}$

Power Consumption

256GB

Parameter	Symbol	Min	Typ	Max	Unit	Test conditions	Note
Operation current	I_{cc2}		2.5	5	W		
Idle (Slumber)	I_{cc3}		550	1000	mW		
Stand-by (S3)	I_{cc1}		450	900	mW		
Sleep (S4)	I_{cc0}		450	900	mW		

128GB

Parameter	Symbol	Min	Typ	Max	Unit	Test conditions	Note
Operation current	I_{cc2}		2.5	5	W		
Idle (Slumber)	I_{cc3}		550	1000	mW		
Stand-by (S3)	I_{cc1}		450	900	mW		
Sleep (S4)	I_{cc0}		450	900	mW		

64GB

Parameter	Symbol	Min	Typ	Max	Unit	Test conditions	Note
Operation current	I_{cc2}		2	4.5	W		
Idle	I_{cc3}		550	1000	mW		
Stand-by (S3)	I_{cc1}		450	900	mW		
Sleep (S4)	I_{cc0}		450	900	mW		

Environmental Specifications

- Operating temperature: 0°C ~ 70°C
- Storage temperature: -40° ~ 85°C
- Storage humidity: 95% (max)

- Vibration Operating: 2.17G (7-800Hz)
- Vibration Non-Operation: 20G (20-2000Hz)
- Shock: 1500G Acceleration force (0.5ms - Half-sine waveform)
- MTBF: 1,000,000 Hrs

Form Factor Dimensions (measurement in mm.)

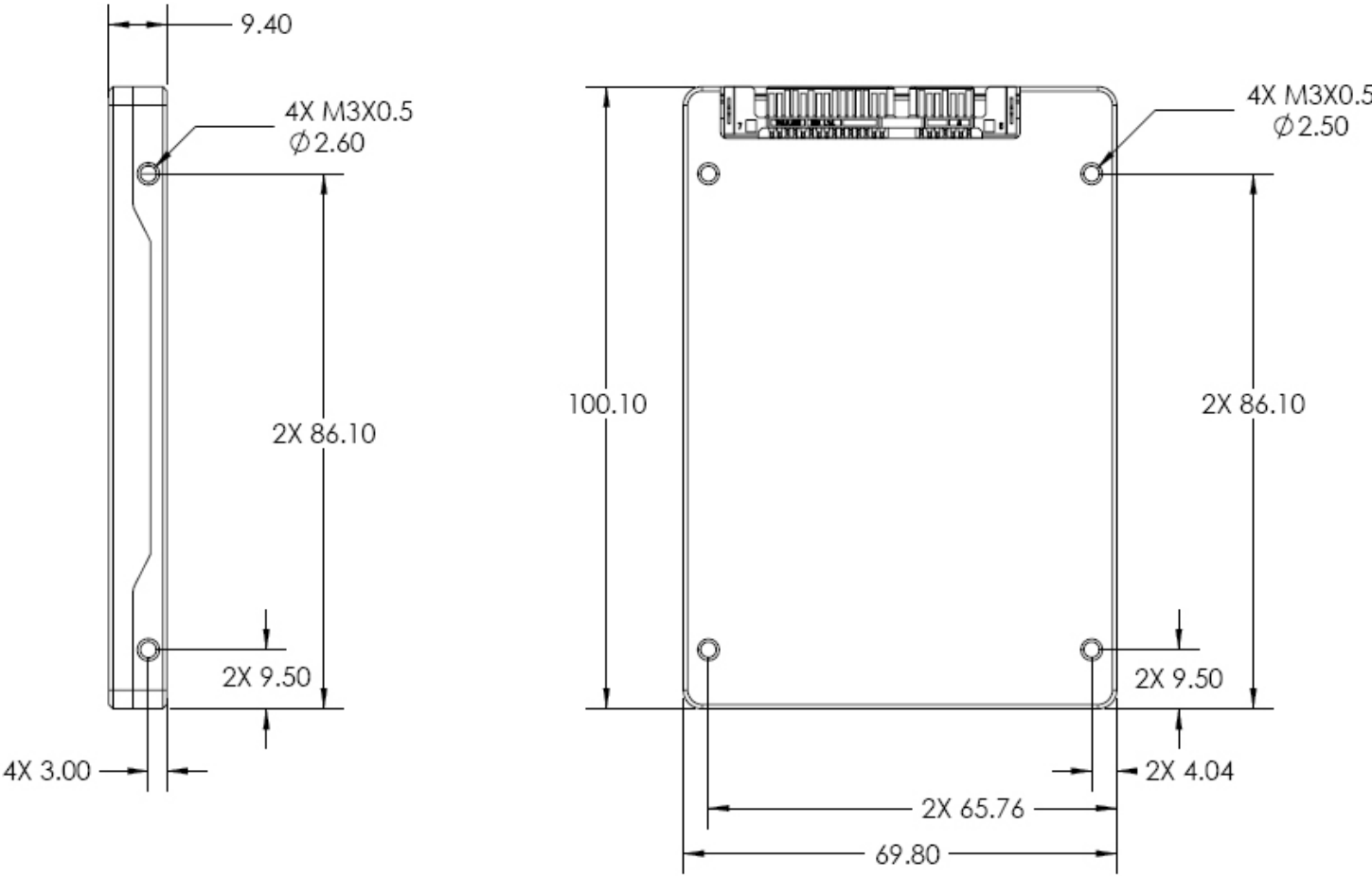


Figure 2: Kingston SSDNow V+ series Mechanical Drawing